

Some Information on the Menzies and Jack Collections in the Herbarium, Royal Botanic Garden, Edinburgh

BY

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In recent years much interest has been shown in the work of two early, eminent Scottish botanists, both by profession medical men: the one, Archibald Menzies (1754-1842), a graduate of Edinburgh; the other, William Jack (1795-1822), a graduate of Aberdeen. Brief biographical summaries follow.

ARCHIBALD MENZIES (1754-1842), b. Aberfeldy, 15th March 1754. Graduated Edinburgh, 1781. Assistant Surgeon R.N., 1782, under Rodney. Served on Halifax Station till 1786, collected east coast America and West Indies. Under Colnett, 1786-91. Under Vancouver, 1791-95. d. London, 15th February 1842.

See Newcombe, C. F. (Editor), *Menzies' Journal of Vancouver's Voyage*, April to October 1792; Arch. British Columbia mem. Victoria B.C., 1923. Balfour, F. R. S., Archibald Menzies, 1754-1842, Botanist, Zoologist, Medico and Explorer; Proc. Linn. Soc., 156 Session, 170-183 (1945).

WILLIAM JACK (1795-1822), b. Aberdeen, 29th January 1795. M.A. Aberdeen: Bengal Medical Service, 1813. With Raffles to Sumatra, 1818. d. Sumatra, 15th September 1822.

See Burkill, I. H., William Jack's Letters to Nathaniel Wallich, 1819-1821. Journ. Straits Branch Royal Asiatic Society, No. 73, 147-268 (1916).

Merrill, E. D., William Jack's Genera and Species of Malaysian Plants. Journal Arnold Arboretum, xxxiii, 199-251 (1952).

van Steenis-Kruseman, M. J., Malaysian Plant Collectors and Collections (Flora Malesiana I), 156-7 (1950).

Menzies is widely known by the record of his journey with Vancouver round the world, and by the many plants named after him; his name is commonly associated in our minds with North-West America. The account of his life and work, published in the Archives of British Columbia, is a valuable record and our chief source of information about him. This volume, which appeared in 1923 under the title *Menzies' Journal of Vancouver's Voyage*, contains a biography by J. Forsyth, the Journal itself, botanical and ethnological notes by the editor, C. F. Newcombe, M.D., and an appended bibliography of shorter publications pertaining to Menzies' life and work. Another account, given by the late F. R. S. Balfour as an address to the Linnean Society to mark the centenary of Menzies' death, was published in the Proceedings in 1945.

William Jack is remembered for his pioneer work as a botanist in Malaysia, and as one of Wallich's correspondents. *William Jack's Letters to Nathaniel Wallich 1819-1821* is the title of an interesting paper published by I. H. Burkill, in July 1916; Mrs. M. J. van Steenis-Kruseman, author of *Malaysian Plant Collectors and Collections*, gives an excellent summary of Jack's botanical work in this volume, published in 1950; and E. D. Merrill has written

detailed notes with references to *William Jack's Genera and Species of Malaysian Plants* in the *Journal of the Arnold Arboretum*, in July 1952.

It might be expected, since so much has already been written, that there can be little left to add to what has already been recorded concerning these two men. On the contrary, a recent investigation has disclosed fresh facts which are well worthy of note, especially in view of the recent widespread interest in their work. Why these two men should now be considered together will presently be understood; that their names should be linked is a curious coincidence rather than a matter of any particular historical significance.

The investigation to which I have referred was set in train by a letter from Mrs. van Steenis-Kruseman, who had written to say that Dr. Pichi-Sermolli had found, in the British Museum, a specimen of *Ophioglossum* from South Sumatra, with the name of Menzies as collector, and to ask if it could be verified, from any material in Edinburgh, whether or not Menzies had actually visited Sumatra. It was remarked that, if he had in fact visited Sumatra, it must have been on the outward voyage.

Menzies bequeathed his Cryptogamic Herbarium, which runs to some 700 sheets, to the Royal Botanic Garden, where he had studied under Dr. John Hope. It was incorporated in 1842, the year that Menzies died.

A search brought to light a sheet of which the British Museum specimen is doubtless a duplicate, and which is clearly annotated on the reverse, in Menzies' own handwriting, "S. Sumatra 1789." Furthermore, altogether seven specimens from Sumatra were found. All of these are signed by Menzies, and all bear the date 1789. There can therefore be no doubt that Menzies visited Sumatra.

But it is no less certain that he did not visit Sumatra in the course of his famous voyage with Vancouver. The two ships—the *Discovery*, a sloop of 300 tons, and the *Chatham*, a brig of 140 tons—set out from Falmouth on 1st April 1791. Then, by way of the Cape of Good Hope, Australia (King George's Sound), New Zealand (Dusky Bay and Facile Bay), the Chatham Islands and the Hawaiian Islands they reached the west coast of North America, where Menzies discovered the great majority of the plants with which his name is associated. On the homeward journey, after visiting the Galapagos Islands and Juan Fernandez, they called at Valparaiso in April 1795 (when Menzies collected seed of *Araucaria imbricata*), then they touched at Rio de Janeiro and afterwards at St. Helena, eventually arriving home in October that same year. All the above ports of call are confirmed by specimens in the Edinburgh Herbarium.

It was not on this voyage, however, but on an earlier one, that Menzies called at Sumatra; it is not generally known that the Vancouver voyage was not the first time that Menzies had circumnavigated the world. The other voyage had none of the publicity accorded to Vancouver, and of it little is known; if Menzies kept a Journal, it has not survived.

Menzies first sailed round the world between 1786 and 1789, under Captain Colnett on the *Prince of Wales*, going out by Cape Horn (they touched at Staten Island) to the north-west coast of America, and returning by the Hawaiian Islands, New Zealand and the Cape of Good Hope. A call was made at Sumatra on the homeward journey, of this the Herbarium material is sufficient evidence.

What is known of this expedition* has been summarised by Balfour in the address to which reference has been made:—

"In August 1786 he [Menzies] wrote to Banks from Chatham that he would like to be appointed surgeon on the 'Private Adventurer' then fitting out at Deptford. It was in that year that Dr. John Hope, then Curator of the Edinburgh Botanic Garden, recommended his former pupil to the especial attention of Banks. Dr. Hope died later in the same year. The introduction led to his appointment as surgeon on the 'Prince of Wales' owned by the enterprising firm of John and Cadman Etches & Co. This little ship, commanded by Captain Colnett, with the sloop 'Princess Royal,' set off in September 1786 for the North Pacific Coast via Cape Horn.

"They made direct for Nootka Sound on the west side of the land that Vancouver in 1792 proved to be an island and which he called by his name. It was then in the hands of the Spanish. Nootka is now a little-known place, but its name is familiar to us from the several well-known plants to which it is applied, all first seen by Menzies, e.g. *Cupressus nootkatensis*, *Rosa nutkana* and *Rubus nutkanus*. It was at Nootka that Captain Cook had first landed on the coast and a monument to record that event was erected some twenty years ago.

"The voyage round the world took three years; but we know little of what that expedition accomplished, as the Spaniards seized Captain Colnett's papers when they fell foul of him on the North-West Pacific Coast. I believe these documents have now been recovered from Madrid, but have not yet been published. Some of Menzies' notes of localities in his descriptions of his plants in the British Museum (South Kensington) indicate places reached, and in the diary of his subsequent voyage with Vancouver he makes scattered references to this. The 'Prince of Wales' got home in July 1789 by the Cape of Good Hope, having visited Hawaii and New Zealand after leaving the North-West American coast."†

The extent to which our knowledge of this voyage can be supplemented by the Menzies Herbarium does not go far beyond what has already been indicated. Only eleven sheets can definitely be assigned to this expedition, and seven of these are the Sumatran records already mentioned. Of the other four, two are from Staten Island in 1787 and two from the Hawaiian Islands in 1788.

Particulars of these and the Sumatran specimens are as follows:

1787 Staten Island	<i>Polypodium Billiardieri</i> (Willd.) C. Chr.
	<i>Luzula alopecurus</i> Desv.
1788 Hawaiian Islands	<i>Eleusine radularis</i> R. Br.
	<i>Cyperus mucronatus</i> Rottb.
1789 Sumatra	<i>Lygodium scandens</i> (L.) Sw.
	<i>Lygodium flexuosum</i> Sw.
	<i>Cyclophorus adnascens</i> (Sw.) Desv.
	<i>Nephrolepis biserrata</i> (Sw.) Schott.
	<i>Polypodium phymatodes</i> L.
	<i>Drynaria quercifolia</i> (L.) J. Sm.
	<i>Ophioglossum costatum</i> R. Br.

* See postscript.

† Balfour in Proc. Linn. Soc., 156th Session, 171-2 (1945).

A further observation, however, may be made, namely, that some undated specimens also may have been collected on this journey, for it should not be assumed that all undated material properly belongs to the Vancouver voyage. Colnett and Vancouver followed different routes, but they both visited North-West America (4), the Hawaiian Islands (7), New Zealand and the Cape of Good Hope (6). The figures in brackets indicate the number of undated specimens (Cryptogams) Menzies collected in these localities, but there is no means of determining to which journey they should be assigned. It is probable that some, at least, belong to the Colnett expedition.

Although the information which the Menzies material affords is limited, it none the less enables us to fill in some details of the homeward journey between New Zealand and the Cape of Good Hope; we know now that the course taken was by no means direct. That it included a call at Sumatra is evident from the list of specimens cited above.

After leaving Sumatra, the route, it would appear, lay by Singapore and Madagascar to the Cape of Good Hope. Two undated specimens of Menzies' collecting support this view, one from Singapore, the other from Madagascar, and these can scarcely belong to the Vancouver voyage.

Only one other specimen was found which pertains to the Colnett expedition, and this was discovered in the general herbarium. In addition to his Cryptogamic Herbarium, Menzies bequeathed to Edinburgh his Gramineae, Junci and Carices. All this material was examined, but none of it was found to have any bearing on the present discussion. Outside these specified groups, there are no more than a very few sheets collected by Menzies in the whole herbarium, yet one odd specimen was found which was collected by Menzies in North-West America in 1787 or 1788. This must therefore be included as one of the records of the Colnett expedition. According to the citation this specimen was originally in J. Sadler's Herbarium; he was Curator of the Garden from 1879 to 1882 and his herbarium was acquired after his death. The sheet in question is annotated "*Viola tridentata* West Coast of North America 1787/88 Menzies." This is as far as the material available permits us to supplement the Menzies record, and concludes this part of the enquiry.

Further points of interest in connection with the present investigation are concerned with William Jack.

Merrill in his far-flung search for Jack specimens visited Edinburgh in July 1951. In his paper he observes:—

"It is evident that Jack sent certain Sumatran material home, but it is not known what became of some of these collections. Thus in a Jack letter to Wallich, dated at Bencoolen, September 9, 1820, there is a very amusing account of a collection of botanical specimens he selected at the request of a certain Marchioness for the Edinburgh Museum. In this letter, *inter alia*, he says: 'My best specimens are all gone home, as you know.' Mr. Burkill's attempts to locate the Jack specimens of this particular sending failed, nor in the relatively little time I could spend in the Edinburgh herbarium in July, 1951, did I succeed in locating any of these fugitive specimens. Late in 1951 Mr. Burtt found one specimen, of which Dr. J. M. Cowan kindly supplied a photograph. Jack had mentioned the poor quality of the specimens he selected for the Edinburgh Museum, and the type collection of *Didymocarpus crinita* Jack verifies his statement."*

* Merrill in Journ. Arn. Arb., xxxiii, 207-8 (1952).

Since Merrill's visit no further Jack material had come to light. I was therefore agreeably surprised, on turning over the Menzies' Herbarium at the behest of Mrs. van Steenis-Kruseman, to come across, quite by chance, a specimen which undoubtedly had been collected by Jack. Fortunately the annotation was observed, although the original sheet, which is of small size, had been partly pasted down on another of standard size, and the essential data had been written on the back. Another Jack specimen was found later; both are ferns from Sumatra—"Trichomanes rigidum Sm." and "*Hymenophyllum flabellatum* Labill." These are the only Jack sheets in the Menzies Herbarium.

Here it may be explained that about half the material in the Menzies Cryptogamic Herbarium was collected by Menzies himself, the other half apparently he acquired by gift or exchange. He received a large number of plants from Wallich (and it may have been from the Wallich collection that the Jack material was obtained), others from Lambert, N. B. Ward, Howard and R. Brown.

But the Menzies Herbarium is, of course, quite apart from the other material, which was sent by Jack to the Marchioness for Edinburgh. This collection is referred to twice in Jack's letters to Nathaniel Wallich, published by Burkill, and in amusing terms that deserve quotation. The extracts also suggest that, valuable as these Jack specimens now prove to be as a result of the destruction of his own collections in the burning of the "Fame," they were not put together with the same meticulous care he would have expended on a consignment for Wallich or Robert Brown. In a letter dated 19th August 1820, the letter which accompanied copies of the first part of the Malayan Miscellanies to come from the press, Jack wrote, "Lady Hastings [wife of the Governor-General] has requested me to send a Hortus Siccus for the Edinburgh Museum, which, of course, I must do, and I shall take care that at least the things be neatly put up and in good paper, which perhaps are points that are better understood than the value of the specimens. Were it not that it would be as well on Sir Stamford's account to keep her in good humour, I should hardly be induced to take even that trouble for any attention I have ever received, or good I am ever likely to get from her."

Then again, on 9th September 1820, he writes: "In one of my late letters from Lindsay, he communicates a request from the Marchioness, that I would send her a Hortus Siccus for her Edinburgh Museum: I comply with it by this occasion, but mean to humbug her in the matter. My best specimens have all gone home, as you know, . . . I have therefore put up a parcel of second-rate ones, with plenty of good paper, which is of more consequence (Kaleidoscopically!) and sent her such a flaming list, as will make her think she has the most precious and learned collection ever sent from India. I trust to her indolence never to look into them; indeed if she did, I don't suppose she would know a Mangosteen from an apple, and then as for the *most learned* body to which they are to go, the name of the Marchioness will humbug them, and I daresay the sapient Professor of Botany will in reply extol her Ladyship's skill and discernment in the selection, and sound the praises of that of which he knows nothing about." *

Burkill adds that he had written to Sir T. Carlaw, Director of the Scottish Museum, Edinburgh, who could find no record of such a gift and no specimens.

* Burkill in Journ. Str. Br. Roy. As. Soc. No. 73, 215 (1916).

We were by now familiar with Jack's bold handwriting, and had the lists in Burkill's and Merrill's papers (hitherto unavailable) as a likely clue to some of the specimens should there chance to be any in the general herbarium at the Garden. Further investigation seemed called for. In a preliminary search a number of specimens were indeed discovered and a methodical search was then initiated. The result is gratifying for in all 64 Jack specimens (including one duplicate) have been found. I can trace no record of how and when they were acquired (they were probably in the University Herbarium which was transferred to the Garden in 1839), but, judging from the list and the condition of most of them, it seems likely that these are the very specimens sent by Jack himself to the Marchioness.

The list of the 63 species is given below; of these, 33 are listed either by Burkill * (*Jack's Herbarium as far as is recorded in various places*) or by Merrill † (*William Jack's Genera and Species*), or by both. Of the 33, 9 (marked B) are listed by Burkill only, and the other 24 (marked B & M) are cited by both; the remaining 30 are listed by neither, and are presumably new records for the Jack Herbarium, not duplicated elsewhere. Critical study will probably show that the 19 specimens marked with an asterisk (*) can be accepted as isotypes. The names used by Jack himself are printed in italic type: corrected determinations, where necessary, are given in block capitals. I am indebted to J. Keenan, A. N. MacLeod and Rosemary Smith for their careful and painstaking scrutiny of a mass of herbarium material.

*List of Jack's Specimens in the General Herbarium at the
Royal Botanic Garden, Edinburgh*

- Aerides*. Orchidacea indet.
- B. *Alpinia mutica* Roxb. The material is insufficient to enable one to say with certainty whether the specimen is the true *A. MUTICA* Roxb. or *A. ASSIMILIS* Ridl.
- Anacardium occidentale* L.
- Anisomeles oblonga* Jack [MS]. *A. MALABARICA* (L.) R. Br. ex Sims
- * B. & M. *Bauhinia bidentata* Jack
Bauhinia integrifolia Roxb.
Calophyllum Bintangor [Roxb.]. *C. INOPHYLLUM* L. sens. lat.
Calophyllum. *C. INOPHYLLUM* L. sens. lat.
- B. & M. *Celtis attenuata* Jack [MS]. *TREMA ORIENTALIS* (L.) Bl.
- B. *Clematis Gouriana* Roxb. *NARAVELIA LAURIFOLIA* Wall.
- Clerodendrum* { *inermis* L.
 littoreum Rumph. } *C. INERME* (L.) Gaertn.
- * B. & M. *Clerodendrum molle* Jack [non H. B. K.]. *C. VILLOSUM* Bl.
Commersonia echinata [Forst.]. *C. BARTRAMIA* (L.) Merrill
- * B. & M. *Connarus ferrugineus* Jack
CYPERUS DIFFUSUS Vahl. "*Scirpoidea*"
- * B. & M. *Didymocarpus crinitus* Jack
Dracaena—two species. *D. ANGUSTIFOLIA* Roxb. and *D. CANTLEYI* Bak. (?)

* Burkill in Journ. Str. Br. Roy. As. Soc., No. 73, 215 and 241-268 (1916).

† Merrill in Journ. Arn. Arb., xxxiii, 207 (1952).

- * B. & M. *Elaeocarpus*—probably a new species. E. NITIDUS Jack—probably isotype material
Embelia glabra Jack [MS]. MAESA RAMENTACEA (Roxb.) A.DC. sens. lat.
- B. *Eugenia caryophyllata* (*Caryophyllus aromaticus*). E. AROMATICA (L.) Baill.
Eugenia sp. E. LONGIFLORA (Presl) F.-Vill.?
Flagellaria indica L.
- B. *Fagraea fragrans* Roxb.
- * B. & M. *Fagraea racemosa* Jack
Garcinia cornea, mas. G. HOMBRONIANA Pierre?
- B. *Getonia floribunda* Roxb. (*Calycopteris* Lam.). CALYCOPTERIS FLORIBUNDA Lam.
Gnetum Gnemon. PETUNGA VENULOSA Hook f.
Hedysarum. DESMODIUM POLYCARPUM (Lam.) DC.—det. A. K. Schindler. This specimen also bears Jack's label "*Crotalaria laburnifolia*," presumably in error.
Hibiscus. H. TILIACEUS L.
Ixora. I. NIGRICANS R. Br.
Jasminum. J. BIFARIUM Wall.
- B. *Juniperus elatus* Roxb. DACRYDIUM ELATUM Wall.
Justicia Gendarussa Willd. GENDARUSSA VULGARIS Nees.
- * B. & M. *Limonia ? leptostachya* Jack [MS]. GALEARIA JACKIANA (R. Br.) Miq.
B. *Melaleuca Cajuputi* Roxb. M. LEUCADENDRON L.
- * B. & M. *Melastoma parviflora* Jack [MS]. ALLOMORPHIA EXIGUA (Jack) Bl. (Syn. *Melastoma exiguum* Jack—this sheet is probably isotype material).
- * B. & M. *Melia excelsa* Jack (2 specimens)
B. & M. *Microcos tomentosa* Sm. If placed in *Grewia* this is *G. paniculata* Roxb.
- * B. & M. *Mimosa jiringa* Jack. PITHECELLOBIUM JIRINGA (Jack) Prain
- * B. & M. *Morinda polysperma* Jack. LUCINAEA POLYSPERMA (Jack) K. Schum. This sheet is probably isotype material although only marked "*Rubiacea*" on the label by Jack himself
- * B. & M. *Morinda tetrandra* Jack. M. UMBELLATA L. sens. lat.
Myrtus tomentosa L. RHODOMYRTUS TOMENTOSA (L.) Wight
B. *Pancratium amboinense* L. EURYCLES AMBOINENSIS (L.) Lindl.
Panicum italicum? SETARIA VERTICILLATA Beauv.
- * B. & M. *Psychotria malayana* Jack
Pterospermum suberifolium. P. JAVANICUM Junghn.
- * B. & M. *Rottlera alba* Roxb. [ex Jack]. MALLOTUS ALBUS (Roxb. ex Jack) Muell.-Arg.
B. *Rubus moluccanus* [L.]
B. & M. *Sapindus rubiginosus* Roxb. ERIOGLOSSUM RUBIGINOSUM (Roxb.) Bl.
Sida. S. RHOMBIFOLIA L.?
- * B. & M. *Sonerila erecta* Jack
B. & M. *Sonerila moluccana* Roxb.
Sophora tomentosa L.

* B. & M. *Sphenodesme pentandra* Jack

* B. & M. *Sterculia angustifolia* Roxb. [ex Jack]. *S. RUBIGINOSA* Vent. var. *ENSIFOLIA* (Mast.) Ridl. *S. angustifolia* Jack provides the earliest specific name if the plant is considered distinct from *S. rubiginosa*, as is strongly suggested by the herbarium material.

Tacca abumbrata Jack [MS]. *T. CRISTATA* Jack

Tetracera trigyna Roxb. *T. INDICA* (Houtt. ex Christm & Panz.) Merr.—det. R. D. Hoogland

TRIGONOSTEMON LONGIFOLIUS Muell. Arg. (*Croton longifolius* Wall. nomen nudum). "*A singular declinous plant unascertained.*"

* B. & M. *UROPHYLLUM ARBOREUM* (Reinw. ex Bl.) Korth. (Syn. *U. glabrum* Wall.). Probably isotype material of Wallich's name. Jack's full label is: "*A new genus which I have not yet named belonging to the family of Rubiaceae. Its characters are very peculiar and place it near to Patima of Aublet. There are two species, native of Sumatra, etc.—both distinguished by very acuminate leaves.*" Burkill, and following him Merrill, state that this genus was originally named *Patisma* by Jack, but that he gave Wallich discretion to alter the name. Jack's label on this specimen, however, makes it clear that the name *Patisma* is simply a misreading of his reference to *Patima* Aublet as the most closely related genus.

Uvaria sp.—undescribed? *CYATHOSTEMA HOOKERI* King—det. J. Sinclair

* B. & M. *Vitex arborea* Roxb. [ex Jack]. *V. PUBESCENS* Vahl
Vitex Negundo [L.]

POSTSCRIPT

Balfour's hint that Captain Colnett's papers might be in this country led me to institute a search, and after this paper had been written his Journal was eventually found in the Public Record Office, Chancery Lane, London, W.C.2 The manuscript, which is presumably in Captain Colnett's handwriting, I have recently seen, but unfortunately I had no opportunity of studying it fully.

The voyage is described in some detail. Interspersed between tabular statements showing "courses and winds" are brief accounts of the various stages of the voyage and of the places visited and their inhabitants. The text includes a number of observations on birds and fishes, with descriptions sometimes illustrated by water colours; but references to individual plants and to vegetation are few, and are brief and in general terms.

As far as I could discover no mention is made of Menzies by name nor of his botanical collections, and only two references concern "the Surgeon." "On Sunday 28th January being a holiday I went to the head of the harbour [St. Vincent in Tierra del Fuego] in the boat accompanied by Captain Drummond and the Surgeon," and at Port Banks, "The Surgeon also got what medicine he was most in want of."

The voyage began on 16th October 1786: the call at Staten Island is confirmed, and afterwards Nootka, and the Hawaiian and Charlotte Islands were visited. The latter part of the Journal is sketchy and incomplete.

The following extract is from Captain Colnett's description of Nootka and its inhabitants. It indicates the scope of his remarks, and is the longest of the several references to vegetation.

"The trees are chiefly Cypress and Canadian Pine the difference is known by their colours, the Cypress being the palest. Vegetable products are numerous; those I do not mistake for their Fruits are Strawberries, raspberries, currants, gooseberries, alder, partridge berries and apples, the latter about the size of a small Cherry, there are several kinds of berries, the best of them red and purple ones growing on Bushes a little larger than currant, a small narrow leaf like the Black Thorn and the Fruit about the size of a large Sloe those berries are preferable to any of the rest and found in greater planting, the other sorts that I do not know though eaten by the natives are held in no esteem by them. Many of the plants that were found promiscuously on the shore were eaten of and agreed with us. The most common ones were leeks and a green called Lamb's Quarters this last we were fondest of and are most easily procured. I have seen great quantities growing on the east side of America and in England and eaten of it before."